

CReW's Lines

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A message from the CReW's new captain!



As the new Coordinator of the GEF CReW Project, I don't think I need to introduce myself - otherwise there is something I am not doing right! Our colleagues and partners have known me since July 2011 as the Project's Technical Specialist

working with the guidance of my predecessor, Denise Forrest, from whom I learned a lot. Her knowledge of the region, commitment, and ideas, helped me gain an understanding of the region and the challenges it faces. Indeed, I learned a lot from her during the time that we worked together and I thank her for that.

The GEF CReW Project introduces a new approach and innovation and requires that water and wastewater stakeholders sometimes think outside the box to find solutions to the persistent and increasingly frustrating problem of poor wastewater management. While working regionally in different languages and cultures makes it more challenging, the project experience is enriched by different approaches and solutions.

The expectation that the project would be completed by mid-2015 has proven unrealistic.

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What is Better Wastewater Management Worth?

CReW undertakes resource valuation studies with the help of the World Resource Institute

The GEF CReW Project, under Component 2: Reforms for Wastewater Management, is conducting Pilot Resource Valuation studies in two participating countries, Panama and Trinidad and Tobago—the first countries to ratify the LBS Protocol. These studies are being conducted by the World Resource Institute (WRI) which is working with local agencies. The Environmental Management Authority (EMA) is the lead agency in Trinidad and Tobago while the Autoridad Nacional del Ambiente (ANAM) is the lead agency in Panama.

These Natural Resource Valuation Studies aim to improve local and national capacity for wastewater management. Project objectives and activities include:

- Identifying infrastructure investment options for wastewater management, for both green and grey infrastructure.



Boat tours head to Buccoo Reef from Pigeon Point, Tobago

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The GEF CReW Project supported participation of CReW countries in the Second Meeting of the Contracting Parties to the Protocol Concerning Pollution from Land-Based Sources and Activities in the Wider Caribbean Region (WCR) and the Thirteenth Meeting of the Contracting Parties to the Convention for the Protection and Development of the Marine Environment of the WCR, which took place 10th—13th December 2014 in Cartagena, Colombia, as part of ongoing efforts to promote ratification of the LBS Protocol by all countries of the WCR. See www.cep.unep.org/meetings/2014

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tic, therefore, as endorsed by the Project Steering Committee at its last meeting in January 2014 (PSC3), we are currently working to finalize arrangements for an extension. This would mean that Component 1: Investment and Sustainable Financing, which is being executed by the IDB and which aims to test individual Pilot financing mechanisms (PFMs) in four countries, Belize, Guyana, Jamaica and Trinidad & Tobago, would end in December 2016. Component 2: Reforms for Wastewater Management and Component 3: Communications, Outreach and Training, which are being implemented by UNEP, have been granted a no-cost extension to enable activities to be completed by the end of 2015. The extended time will allow us to complete implementation and document experiences and lessons learned.

The Project faces many challenges in the year ahead. However, we are optimistic. I am proud to be a part of the CReW, not just because of the importance and relevance of the Project, but also because of the people around me who provide excellent support and guidance: The IDB Team Leader - Rodrigo Riquelme, the IDB Water Specialists involved in the project, the UNEP staff headed by Nelson Andrade Colmenares, Isabelle Vanderbeck and Chris Corbin, the four Pilot Project Management Units, the National Focal Points and, not least, my colleagues in the Project Coordination Group. I would like to thank this wonderful team as well as all our regional and international partners for their excellent support and hard work.

In 2015, the CReW will begin the construction of facilities in the four Pilot countries. Training and other capacity building activities as well as a great deal of outreach work will continue as implementation of most of the Small Scale Funding Agreements with the participating countries and partner institutions continue. Considerable effort will go into documenting project experiences and lessons learned using the Community of Practice, experience notes, case studies, media articles and video documentaries. Serious consideration will be given to sustaining and replicating gains made and applying the lessons learned in the GEF CReW Project with development of a PIF for a follow-on project for consideration by the GEF in the latter part of 2015. However, the team is optimistic and ready.

The future wellbeing of the Caribbean region is in the balance. Although the GEF CReW Project is small in comparison with the size of the problem of poor wastewater management, we believe that we have begun to move in the right direction and that with the quality of professionals and people in the region, significant improvements will be made. The GEF CReW Project is a small step in the right direction and I am proud to be a part of it. We have to succeed, there is no other way.

- Alfredo Coello Vazquez,
GEF CReW Project Coordinator

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- Valuing costs and benefits of possible wastewater management options, including both direct and indirect benefits.
- Developing a greater understanding and capacity for valuing coastal ecosystems and wastewater management options and improving regional understanding of connection between wastewater treatment and coastal ecosystems.

Introductory Workshops

National introductory workshops were held in both countries: In Trinidad on 17th October, and in Tobago on 21st October; in Bocas del Toro, Panama on 18th February and 20th November. Representatives of government agencies, research institutes/academia, public and private sector institutions and local NGOs participated.

These workshops each included an overview of the GEF CReW project; the resource valuation study objectives; an overview of the pilot sites including wastewater regulations, pollution sources, and current treatment facilities; a guided discussion on current and future wastewater management scenarios; an introduction to the proposed resource valuation methodology and data needs; a guided discussion on relevant costs and benefits to include; exploration of potential data sources and gaps, and a guided discussion on developing a communications strategy for dissemination of analysis results.

Presentation and discussion at the workshops was rich and explored important ecosystems, ecosystem services, and human health issues to include in the study. Participants also discussed potential data sources, data gaps and applicable studies. In terms of communication and outreach strategy, participants were asked to consider: who the key decision-makers are (i.e. who should the study influence?); the best strategy to deliver results to target audiences including the best communication channels; and upcoming events and conferences which would provide opportunities to disseminate results.



Trinidad workshop participants, October 2014



Tobago workshop participants, October 2014

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*Participants in
National Introductory
Workshops, Boca del
Toro, Panama,
February (above) and
November 2014 (right)*



Resource Valuation Study Areas

In Trinidad and Tobago:

In **Trinidad** the initial proposed study area focused on the Caroni River Basin, but the Basin includes multiple sub-catchments with diverse issues, uses, and different levels of data availability on current and future wastewater management infrastructure options. The area finally chosen was Chaguanas, a rapidly developing urban area that currently lacks sufficient wastewater treatment and which directly impacts the Caroni swamp.



Chaguanas, Trinidad

As of 2008, only 14% of the population was connected to centralized sewerage facilities. There are many small wastewater treatment plants that are in need of repair and raw sewage is frequently discharged directly into streams. The study site selected includes the Cunupia and Guayamare catchments, pending data availability and a clear wastewater improvement scenario to evaluate.

In **Tobago** the valuation study will focus on the Buccoo Reef / Bon Accord ecological complex, including the Courland catchment. In 2011, Alpha Engineering & Design (Alpha) prepared a Certificate of Environmental Clearance with proposed plans for the area including Bon Accord, Coral Gardens/Buccoo, and Milford Court areas. This proposal was accepted as a short to medium term future wastewater management improvement scenario for the WRI valuation



Buccoo Reef, Southwest Tobago

study. It includes upgrades to the Bon Accord and Golden Grove waste stabilization ponds and increased household and commercial connections to wastewater treatment infrastructure including sewerage mains and lift stations. Additionally, it was agreed that another future wastewater management scenario which could potentially be explored would include the expansion of the Alpha proposal to include additional tertiary treatment.

Panama:

In Panama, Isla Colón, Bocas del Toro is the site of the pilot valuation study. While consideration was originally given to studying a larger area, it was agreed that for this pilot study, this smaller area was more feasible. There is currently a wastewater treatment plant on the island that offers treatment at the secondary level to which approximately 80% of the local population is connected. The treated wastewater is discharged into the sea and the sludge undergoes a process of settling and drying out. However, there are many issues.

Informal settlements of indigenous peoples in the adjacent mangrove are not connected to wastewater treatment. Garbage is dumped directly into the sea and there is a lack of potable water and sanitation. The existing wastewater treatment is in need of repair and only treats wastewater coming from homes and businesses to the small isthmus, a narrow strip of land separating the small peninsula which includes the city of Bocas, and not most of the area of Isla Colón which is forested but under pressure for development. Some people are putting sewage into storm drains. The quality of drinking water in the area is poor and water demand is increasing as tourism increases. There is some evidence of contamination of groundwater. Some health problems in the area, particularly in the informal settlements, may be attributed to poor water quality and a lack of sanitation. These are especially bad in informal settlements.



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Partnering to Deliver Water Utility Reform Training for CEOs and Managers

- collaboration between GEF CREW, the Caribbean Development Bank (CDB), the World Bank Group, the Caribbean Water and Sewerage Association Inc. (CAWASA) and the Global Water Leaders Group, to deliver a ten-week training programme.

Despite significant advances across the sector in the past 25 years, high levels of inefficiency continue to characterize the operations of most Caribbean water utilities. Causes include aging infrastructure and the lack of adequate financing to rehabilitate and expand services as needed. Even where access has improved, consistent service remains a challenge. The benefits of looking at water, wastewater and sanitation in a connected way as emphasized by Integrated Water Resources Management (IWRM) are seldom realized due to the fragmented nature of water and wastewater management in the region.

A study recently commissioned by the CDB indicated that the problems of revenue not covering the full economic cost of providing service, and of high levels of non-revenue water persist, and that water utility companies in the region need to increase their efficiency as well as address these issues if they are to be financially sustainable.

According to the CDB, "One way to assist in improving the current situation is to provide chief executive officers (CEOs), mid-level managers and technical staff, who are responsible for change in their utility companies, with information on best practices and the tools needed to increase efficiency and performance of the utility company's operations and the process used to design and implement reform programmes."

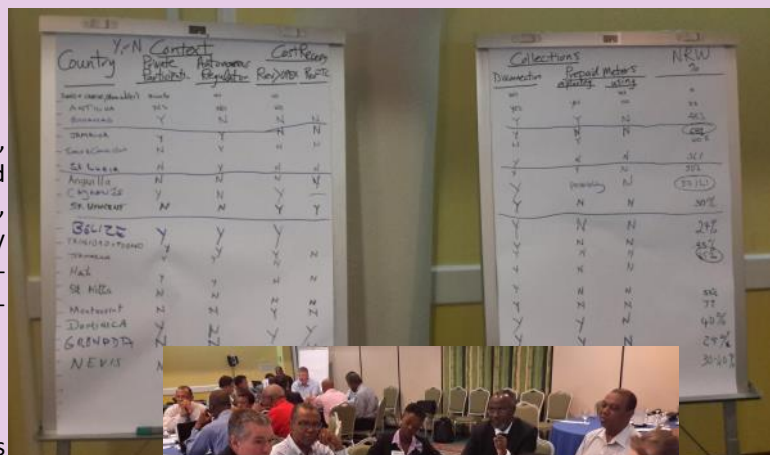
The training consisted of an e-learning course and three workshops. It aimed to increase the capacity of managerial and technical staff in water utility companies to design and implement reforms and to build the awareness of the water utility executives of the importance and benefits of utility reform. This would also assist utilities in coping with the increased demands of not only water supply but wastewater treatment.

The E-Learning Course

The e-learning course which began on 29th September, 2014, was presented by the World Bank Leadership, Learning and Innovation Institute. It provided participants with the knowledge, tools and skills to initiate and sustain reform in their respective utility companies. It included lessons, case studies, exercises and assessments that support the planning and execution of reform programmes in water utility companies.

The CEO Workshop

16 public sector and 3 private sector, water utility CEOs attended the first workshop from 27th – 28th November, 2014 at the Accra Beach Hotel in Barbados. They were provided with a fresh perspective of key topics on the utility reform agenda and a better understanding of their role in the reform process.



The Mid-level Managers' Workshop



Twenty-four mid-level managers from public sector water utility companies who had successfully completed the online water utility reform course (Page 4) participated in this workshop at the CDB Conference Centre in Barbados from 1st - 5th December, 2014. It aimed to build on that course by expanding awareness of the approaches to improving service delivery and to increase awareness of the importance of gender mainstreaming and climate change in the utility's operations.



Participants in the CEO Workshop

First Caribbean Water Leaders' Summit

Forty of the region's foremost water leaders and experts attended the first Caribbean Water Leaders' Summit at the Accra Beach Hotel in Barbados on Saturday 29th November, 2014. CEOs from several utilities and investors and technology specialists from 21 countries focused on the latest developments in the Caribbean municipal water sector. Workshops and panel sessions focused on five key topics:



- Accelerating Access
- Technology Focus
- Driving Performance
- Facilitating Finance
- Improving Tariff Structures for a Sustainable Future.

"Utilities are the key focus of GEF CREW's capacity building efforts" says Christopher Corbin, AMEP Programme Officer at the United Nations Environment Programme's Caribbean Regional Coordinating Unit, one of the Project's Executing Agencies, "Many utilities, especially in the smaller islands, may not have dedicated officers for wastewater management. They don't necessarily recognize the opportunities that more integrated approaches offer. In a forum like this, decision-makers can exchange ideas and learn about cutting-edge technologies and approaches which are working in similar situations. They have the opportunity to network with leaders who face similar challenges."

CREW at the 23rd Annual CWWA Conference and Exhibition

The Bahamas, 6th – 10th October 2014

"Water, Waste and Energy in the Caribbean" was the theme of the Caribbean Water and Wastewater Association's 23rd Annual Conference and Exhibition which took place in The Bahamas from 6th to 10th October 2014. The GEF CREW Project again participated in the Exhibition and the Technical Sessions to share project developments, experiences and lessons learned. Four technical presentations were given based on the Project's work in the previous year:

- "Wastewater Policy Development in the Caribbean: The Way Forward" – Christopher Corbin
- "Regional Media and Wastewater - Knowledge, Attitudes and Practices" - Donna Sue Spencer
- "Complexities of Designing a Revolving Fund for Investment in Improved Wastewater Management that is Exclusive to the Private Sector – the case of Guyana and the GEF CREW Project"- Marlon Daniels
- "Review of the Access to, Availability of, and Organizational Readiness for Uptake of Funding for the Wastewater Sector in Selected Caribbean Countries" – Christopher Corbin



Tiffoni Buckle-McCartney and Alfredo Coello Vazquez man CREW's booth



Journalist, Petre Williams-Raynor, interviews Alfredo during the Exhibition



10th Annual High Level Session (HLS) Ministerial Forum

The Bahamas, 9th and 10th October 2014

GEF CREW, along with the United Nations Environment Programme Regional Coordinating Unit for the Caribbean (UNEP CAR/RCU) collaborated with CWWA and the Global Water Partnership – Caribbean (GWP-C), to host the 10th Annual High Level Session (HLS) Ministerial Forum on 9th and 10th October under the theme “**Caribbean Water Security – Risks and Opportunities**”.

The HLF is a forum in which countries can share progress towards a water secure region that is resilient to climate change, share their experiences and initiatives and help identify priorities for further action at both national and regional levels.



The Honourable Philip E. Brave Davis, Deputy Prime Minister and Minister of Works and Urban Development facilitated the forum through the support of the Bahamas Water and Sewerage Corporation. More than 60 delegates participated, among them ministers, senior administrators, donors, academic scholars, technical, financial, water and sanitation experts from Anguilla, Belize, Cayman

Islands, Dominica, Grenada, Jamaica, Montserrat, St. Lucia, St. Kitts and Nevis, Sweden, Trinidad and Tobago, Turks and Caicos Islands, The Bahamas, and the United States of America.

The discussions were notably optimistic and highlighted a number of significant opportunities to address some of the water management issues and also, the need “to move from talking about water cooperation towards actual collaboration between countries of the region”.



Among HLS participants: (l. to r.): Dr. Gelia Frederick-van Genderen, Director, Water Authority of the Cayman Islands; Senator the Hon. Dr. James L. Fletcher, Minister of Public Service, Information, Broadcasting, Sustainable Development, Energy, Science and Technology, Saint Lucia; Senator the Hon. Ganga Singh, Minister of Environment and Water Resources, Trinidad and Tobago; the Hon. Sharon Ramclan, Deputy Minister of Natural Resources and Agriculture, Belize; the Hon. Philip E. Brave Davis, Deputy Prime Minister and Minister of Works and Urban Development, The Bahamas; the Hon. Robert Pickersgill, Minister of Water, Land, Environment and Climate Change, Jamaica; the Hon. Reginald Austrie, Minister of Lands, Housing, Settlements and Water Resource Management, Dominica; the Hon. Evan Gumbs, Minister of Infrastructure, Communications, Utilities and Housing, Anguilla; Senator the Hon. Simon Stiel, Minister of Agriculture, Grenada; the Hon. George Lightbourne, Minister of Government Support Services,

Key points agreed in the wide-ranging discussions:

- SIDS must get out of their comfort zones and find new and innovative ways of communicating and collaborating to avoid the looming water crisis.
- Countries need to embrace the opportunity for articulation of a Water Agenda under the SAMOA Pathway.
- They also need to embrace opportunities in the evolving articulation of a Water Agenda under the post-2015 Development (Sustainable) Agenda as the world focuses attention on SIDS issues.
- The region must move forward in terms of accessing, mobilizing and operationalizing appropriate funding. The discussion must move beyond Heads of Government to Public Officers and development and funding partners.
- More effort is needed to adopt a more integrated approach to water resources management and pollution prevention. IWRM would prevent most of the water and sanitation problems which prevail in communities throughout the Caribbean region.
- The impact of climate change (rising sea levels, higher ocean temperatures) on coral reefs, fishery stocks etc. is underestimated. More attention must be paid to the Caribbean Sea and Atlantic Ocean. Interventions and collaboration taking place with regard to energy efficiency should be extended to the water sector.
- The HLF has existed for 10 years as an “event”; a new path is required to look at opportunities it brings for the region, as well as how best the forum can intersect programmes officially endorsed by the different countries, putting mechanisms in place to enable the ministers to be not just planners, but implementers.
- The development of water in the region is critical, requiring urgent attention at the highest level. Every opportunity should be explored to elevate the discussion to the CARICOM level following approval of respective Country Heads and Cabinets, with the assistance of the two lead agencies preparing a joint briefing to inform Cabinet discussion. Every effort should be made to formalize the relationship through the COTED, so that the COTED is scheduled around the same time as the HLF sessions, where regional ministers are present and would have the COTED to deal with water matters to CARICOM.
- The role of education and community outreach is vital in all consultative efforts on water issues. Use of institutions of higher learning as well as the UNEP and CREW projects must continue in this regard.

Turks and Caicos Islands; the Hon. Troy Liburd, Minister of Works and Communications, Nevis.

Water Center Training a Great Success!



Under Component 2, The Water Center in Monterrey, Mexico, signed an SSFA with UNEP CAR RCU to provide training for the Spanish-speaking CReW countries (Costa Rica, Guatemala, Honduras and Panama) via online and blended courses in various aspects of wastewater management.

The courses were conducted between June and November 2014.

As a result, 125 persons from these four countries in the Wider Caribbean Region (WCR) received training in water and wastewater management from the Water Center.

Courses covered were: a Diploma in Strategic Management for Water Utilities; a Diploma in Energy and Water Efficiency for Water Utilities, and; shorter courses in Wastewater Treatment Fundamentals and Commercial Management of Water Utilities.



Above, left to right, the five participants who took part in the face-to-face session of the Diploma in Strategic Management at the Water Center: Nacor Trejos Ramos of Panama; Carlos Mazariegos Guerra of Guatemala; Victor Manuel Pineda Alvarado of Honduras; Denise Delvalle González of Panama; and José Ramírez Villalba of Costa Rica. Congratulations to all!

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Isla Colon is the most populated island in the Bocas del Toro archipelago, Panama

The following issues were raised by stakeholders as barriers/challenges in both countries:

- Data collection challenges which reflect institutional challenges around collecting water quality data (e.g., funding, technical capacity).
- Awareness barriers – many stakeholders, including residents and businesses located in the pilot sites, lack a general understanding of wastewater treatment issues and potential impacts on ecosystems/human health. Water quality also isn't bad enough yet to really disrupt tourism (i.e., the water is still clear). Yet, if trends continue and population expands, costs will be much higher than if wastewater issues were to be addressed now.
- Lack of integration of vulnerability drivers (e.g., climate change) into infrastructure decision-making (sewerage and water authorities seem to mainly consider expanding development and population, and seldom, external factors).
- There might be some negative push-back on upgrading wastewater infrastructure due to disruption costs to local businesses associated with construction, particularly in tourism-dependent sites such as Tobago and Bocas del Toro.

Valuation methodology and data needs

WRI proposed a valuation methodology based on typical economic analyses used by infrastructure decision-makers, but tailored for water resource managers and updated to consider ecological and health co-benefits from wastewater treatment. The valuation methodology discussed during the workshops is a cost-benefit analysis that evaluates the marginal improvements to ecosystem and human health as a result of improved wastewater management, and compares these with marginal costs.

The Way Forward

With the assistance of local agencies, WRI has begun looking at different scenarios and is seeking data from sources identified by the stakeholders. Workshops will be planned in both Trinidad and Tobago and Panama to share and review results and to gain additional stakeholder input during the first half of 2015. In the third quarter of 2015, GEF CReW will host a regional workshop to discuss and disseminate the results of these resource valuation studies.

*Wishing you a Happy and Healthy
New Year!*

In 2015 look out for...

DATE	EVENT	PLACE
February	Launch of GEF CReW's New Website!	Online
23-27 February	Sanitation and Governance Workshop	Antigua and Barbuda
2 nd week May	Fourth Project Steering Committee Meeting	Honduras
24-28 August	24 th Annual CWWA Conference & Exhibition	Miami, USA

Meet the GEF CReW Project's new Technical Specialist!

Pedro Moreo Mir, an Industrial Engineer from the island of Mallorca, Spain, joined the GEF CReW Project Coordinating Group at the beginning of December 2014 as the new Technical Specialist.



He has significant experience managing projects in both the public and private sectors, in the construction of environmentally friendly systems, the rehabilitation of wastewater treatment plants, and the review of infrastructure projects to ensure compliance with local, regional and international regulations, standards and policies and environmental protocols.

Prior to joining the CReW he worked on a number of projects in Jamaica: the new Digicel Building in downtown Kingston, the Vice Chancellery Building at UWI, Mona, the Gran Bahia Principe resort, and the rehabilitation of 26 pump stations located in Kingston, a NWC project funded by IDB.

Contact him at: pmoreo@iadb.org



GEF CReW Project Background:

The CReW is a four-year project, funded by the Global Environment Facility (GEF) and implemented by the Inter-American Development Bank (IDB) and United Nations Environment Programme (UNEP). It was established in 2011.

It aims:

- To provide sustainable financing for the wastewater sector
- To support policy and legislative reforms, and
- To foster regional dialogue and knowledge exchange amongst key stakeholders in the WCR.

There are thirteen participating countries: Antigua & Barbuda, Barbados, Belize, Costa Rica, Jamaica, Guatemala, Guyana, Honduras, Panamá, Saint Lucia, Saint Vincent & the Grenadines, Suriname, and Trinidad & Tobago.

The Project Coordination Group (PCG) is based in Jamaica, at the offices of the IDB and at UNEP's Caribbean Regional Coordinating Unit which is Secretariat to the Cartagena Convention (UNEP CAR/RCU).

Please check our website and visit (and like!) our Facebook page: [GEF CReW Project](#)

Acknowledging the contributions of the World Resource Institute, Caribbean Development Bank, Global Water Partnership-Caribbean, The Water Center, Caribbean Water and Wastewater Association, Global Water Leaders, and Caribbean Water and Sewerage Association.

Contact Donna Sue Spencer at: ds@cep.unep.org for more information.

For more information contact:

Caribbean Regional Fund for Wastewater Management Project Coordination Group
 6th Floor, Dyoll Building, Inter-American Development Bank
 40—46 Knutsford Boulevard
 Kingston 5, Jamaica, W.I.
 Phone: (876) - 764—0815
 E-mail: crew@iadb.org or ds@cep.unep.org